American Farmer,

AND SPIRIT OF THE AGRICULTURAL JOURNALS OF THE DAY

"O Fortunatos nimium sua si bona norint
"Agricolas." . . . . *Virg.*

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For the American Farmer.

THE WHEAT FLY.

This insect is a common enemy, and often a very destructive one, to our wheat fields. The opinion has been extensively entertained that it was brought to our country by the Hessians during the revolutionary war; and from that opinion it has derived the name of *Hessian fly.*

The opinion which generally prevails relative to the propagation of this fly is, that the egg of the parent fly is deposited, in the fall of the year, when the newly sowed wheat first appears above the ground, somewhere between the blade and the stalk, and there remains until the next spring, when the young fly comes forth and preys upon the tender wheat.

It is difficult I know to overcome long settled opinions, and to remove prejudices which have grown up out of the general concurrence of such opinions. It is safest for society that it should be so, for if we were to throw away long received opinions, whenever any new theory is presented, without due investigation, the world would soon be without any settled principles in science or philosophy. But men should examine with candor and embrace with cheerfulness truths that are *new*, even though they may conflict with familiar theories, if they come with a better show of reason.

I submit then the opinion which I have entertained for several years, and which has been strengthened by every year's investigation, that the insect called the Hessian fly *does not proceed from the egg of any insect, but is the natural product of the grain!* as much so as the root, and the stalk and the blade are.

This opinion of course holds, that organized animalcules are produced in common with vegetable matter, from one and the same substance,—that by the laws of nature they are so blended that one is not produced without the other, not always, perhaps, in the same degree, but are varied in their proportions by the influence of climate, weather and soil.

I have never yet heard of any one who has detected a fly in the act of *depositing* eggs in the wheat, either in the grain or during its growth; the most that has ever been discovered is what is called the *flax seed and worm or maggot* development, after which the ravages are witnessed, and the fly itself is seen upon the young wheat. Is it likely that the close and constant search made by farmers from year to year upon this subject, so seriously affecting their agricultural prosperity, should have failed to detect, at some period or other, this fly depositing its eggs, if there had been any such deposite made, as the present theory supposes?

There is nothing ascertained in support of the common opinion on this subject, but the fact, that there is an appearance on the tender stalk of the young wheat resembling flax seed, in size and shape, and that this becomes in progress of time a destructive insect. But this does not prove that these flax seed appearances are the eggs deposited in the wheat, and we are left to the analogy of nature to find out an adequate cause for them. That cause, in my opinion, as I have already said, is to be found in the laws of the vegetable kingdom, as it stands distinguished from the other great departments of natural philosophy. Analogy is often the best way of ascertaining these laws in their peculiar operation. If it can be shown then, in any single instance, that the *animal and vegetable* principle do operate in harmonious action, and produce at the same time a perfect animal and a perfect vegetable, the presumption is fair and reasonable that this may be the fact in other descriptions, if not in the whole of the vegetable kingdom.

Besides a single fact which I have investigated for several years, I shall advert to others familiar to every one.

The particular case alluded to is the *daily rose bush*, which is known to be the earliest in producing its vernal foliage. My attention was drawn to this bush by finding my fingers marked with a thin gummy substance, after handling the shoots of the earliest spring growth. I was led to investigate this substance and watch its progress. I found that it was an exudation from the sprout itself, and that it enveloped the tender growth and was of the same color; it was easily removed by rubbing the finger over it. This substance in its first appearance has no distinct form; but, as I have before said, it envelopes the young branch like a thin covering of glue or gum. In the course of a very few days it will be found broken in very minute masses, resembling in form precisely what is called the flax seed form of the wheat fly, with the least possible symptoms of animal life. The next stage of this phenomenon is a perfect insect, but still adhering to the sprout, until finally its wings appear, and it leaves the place of its growth. It is not possible, it seems to me, that these animalcules can be the product of eggs deposited on the bush; for in the first place, this tenacious substance is never found on the wood of a previous year's growth, and in the next place, its appearance is too early in the spring for insects to be abroad—and further, there is not the least appearance of an egg until it is broken into the flax seed form.

The next fact to which I shall call your attention, is that which is exhibited by the *garden pea.* Every one has seen this vegetable, in its dry state, in the spring season, producing spontaneously a perfect fly, which cuts its way through the pea, leaving a perfectly round hole, which looks to have been bored by a gimblet. The first appearance of this insect, which may be seen by cracking the pea, is a chrysalis. Now the question is, how did this little worm get into the heart of the pea? Why, by the deposit of the egg of some fly, to be sure, say the advocates of the egg theory. But I ask, when was this egg deposited in the pea? and here I apprehend a difficulty arises which the egg theory will not easily conquer.

The *hull* is first formed after the blossoms fall off, and the pea does not begin its growth *outside* of the hull, but inside of it, and is so perfectly enveloped by it that it would be impossible for any insect to reach it. Besides the process of growing is *outward*, and consequently must throw off and exclude, instead of absorbing or taking in any extraneous matter which may lie against or upon it, so that if the egg could be by any contrivance of the insect placed within the hull, the very laws which govern the growth of the vegetable must exclude and force it off. Besides there is no evidence, no mark upon the hull, giving indications that its secret and interior apartments have been entered by an insect. Certainly, at some period or other of its growth this might be detected, if any such thing had been done even by an *egg depositor.*

The last resort, then, of the advocates of the previous fly agency in producing this pea fly, must be to the blossom.

The deposit, they will say, is made in the blossom, and the egg is absorbed by the subsequent growth. But I fancy the difficulty is not diminished by this resort. The blossom is nothing more than the beautiful garment, often richly perfumed and gaily colored, which nature throws out to conceal and guard the first tender budding of the fruit, and which is thrown aside, when no longer needed for the purpose it was designed to answer, and whatever is connected with this garment when it falls, must likewise fall with it. The smallest possible portion of the hull only can be discerned when the blossom falls, and neither an egg, nor an insect from it, could be placed within the pea, when as yet there is no pea formed. I conclude, therefore, that this insect, peculiar to the pea, does not first eat its way into the pea, and then at some future period eat its way out again, but that it originates within the pea, and is the product of that portion of the vegetable substance which tends to, and if not arrested by violent means, produce these organized animalcules.

The chesnut also gives, as I imagine, conclusive evidence of this co-existence of the animal and vegetable principle in the same substance. The sharp and repulsive burr which encloses this nut, is fully formed and armed against the approach of any insect before there is the slightest formation of the nut itself within its enclosures. To imagine that its thickly pointed coat could be penetrated by any insect, would be doing violence to reason. But what is more common than to find worms eating their way through the hard shell of the chesnut? The same may be said of the hickory nut, which, in its first formation, shows a coat of firm texture capable itself of resisting the efforts of insects to pass it; but besides this, a wall of rocky hardness is found under this outside coating, within which the kernel is formed. Will any body venture to assert that an egg, or any thing else, has been deposited within these walls by any external animal? Yet this hickory nut produces a worm, which eats its way through the unbroken and flinty enclosures that surround it. The walnut, the almond, the filbert, in fact all the hard-shelled as well as the soft fruits, present the same uniform operation and force of the laws of nature. The apple, peach, pear, plumb and cherry, you have a thousand times seen giving evidence of this two-fold production of animal and vegetable matter, either by showing worms reposing at the very core of the fruit, or eating their way out.

The foregoing facts have satisfied my mind that nature presents to us, in what is called the vegetable kingdom, the mysterious union of two distinct principles in one substance, operating in harmony and producing a perfect vegetable and a perfect animal. And this fruit or vegetable is perfect only when both of those principles progress in their proper proportions. If from any accidental cause, the animal principle super-abounds, the fruit is injured, and has a worm in it, and upon the other hand, if the vegetable principle overgrows its animal associate, the fruit becomes dry, and is devoid of its natural and nutritious juices before it has reached the state of ripeness, just as very light wines are soon lost, unless they have a portion of alcoholic spirits thrown in to strengthen them. This union, however, is finally dissolved by the regular laws of nature, when the vegetable portion dies and returns to the earth, and the animal portion in its organized form passes into its *new mode* of existence, and becomes, perhaps, *oviparous*, and from its eggs, probably, a still higher order of insect is produced; and having thus performed its appointed part in the great insect family, this *vegetable* insect lives no longer.

But let us return to the wheat fly and examine some of the facts connected with its destruction of the wheat. On this subject you have no doubt made some observation, and suffered some inconvenience.

It will be asked, if this insect is the natural product of the wheat, why are not its ravages experienced every year alike? In return I might ask, why are not equally good crops made every year? I answer the objector by saying, that if the *seasons* and *soil* were the same every year, the amount of injury to the wheat by this insect would be

the same! Your experience in farming will corroborate the fact. I have no doubt, that the greatest destruction from the fly happens when the spring is cold and vegetation is backward, especially if to these be added a poor slow soil and unskilful cultivation. Still I do not say that there is *more fly* produced under these unfavorable circumstances than when it is otherwise; indeed it is quite consonant with this theory to suppose that the fly is produced more abundantly when the growth of wheat is luxurious and strong.

The explanation of this seeming paradox, I take to be this. The insect, when it has progressed so far as to require food, finds its appropriate nourishment in the tender stalk and blade of the wheat, and feeds upon that entirely, if there is nothing at hand more tender and still better adapted to its delicate capabilities of feeding. Now, a cold, wet spring, not only keeps the wheat down to the feeding powers of the insect, but it likewise prevents the growth of a thousand other little shoots of vegetable substance, which ordinarily are more inviting to the insect. But when the season is favorable to the growth of wheat, and the soil is strong, its growth soon becomes too strong and tough to afford suitable nourishment to the tender insect, and it is driven to other kinds of food, or must perish for lack of nourishment. I may also add, that whilst the wheat is growing rapidly, the small portion of its juices which are abstracted by the insect, are quickly replenished by the abundant flow of sap, which keeps the stalk and blade constantly full of the invigorating principle of its life.

In support of this opinion, I will relate to you a fact which I had several years ago from our mutual friend, the late S. G. O. He told me that a lot of wheat he had near the town showed the ravages of the fly, when he forthwith had all the spare ground around the lot ploughed up and sowed with oats. The fly immediately left the wheat and preyed upon the oats, which, to use his own expression, was literally cut to pieces. I know of no other way of accounting for this, than, that the oats, being a more recent growth, was a more tender and suitable food for the insect.

But let us pass on to another stage of this animalcule production, which we shall find both in the barn and the barn yard. It often happens, after the farmer has got out his wheat and put it into his barn, he finds all at once that the surface of his bank of wheat is covered with a small worm, which is called weevil, and he becomes alarmed because the weevil has got into his wheat! But the true explanation of this phenomenon, in my opinion, is, that it is the *weevil coming out* of the wheat; or to speak more philosophically, it is the *animal* principle of the grain separating itself, or being thrown off, from its combination with the vegetable principle, by the action of a *heat* produced by the too crowded state of the grain, and the absence of a sufficient current of air to take off this heat as fast as it is generated; and unless the bank of wheat is scattered, or a free current of air is thrown upon it, it will soon begin to sprout. There is always more or less moisture in a heated bank of wheat. A perfectly *dry heat* would not produce this development of the weevil, but would *kill* it, as I shall show hereafter. This same fact is often seen in another form in the *barn yard*. This weevil, I apprehend, after leaving the grain does not proceed farther in the progress of its nature, for the reason that it is brought forth under circumstances rather *artificial*, and which do not provide the food necessary for its sustenance, and unless it finds its way out to some neighboring pasture, it must die, since it cannot feed upon the bare grain. But in the barn yard we have often seen the same cause producing the same effect, and carrying it on to the perfect fly state.

You have, I dare say, a thousand times observed millions of insects arising from your wheat *stack*, when they were struck with a stick, or in any manner suddenly disturbed. This is the fly, the identical *wheat fly* which gives the farmer so much apprehension about his wheat fields. I account for its appearance in the wheat stack in this way. It often happens that there is damp weather in the harvesting season, and the wheat is not *hard* ripe, or if it is, it is bound and stacked in a damp state. The stack soon becomes heated, and a temperature is produced like that which acted upon the wheat in the bulk, and the result is the same, the weevil is produced, but here it goes on to the fly state, as the damp soft straw affords it nourishment; and when it reaches the fly state it is then provided for its higher state of existence, and works its way out of the stack and hangs in countless millions upon the surface, fluttering and jumping about until it becomes familiar with the use of its wings, as young birds do around the edge of their nest, until finally they leave it and return no more.

When wheat is sown, the soil furnishes a similar heat and moisture to that which stimulates the grain in the wheat stack and in the garner, and the vegetable portion is the natural and necessary food of the worm or weevil; and I am under the impression that *it is in this state alone*, and I am under the impression that the growing wheat. After it reaches that it feeds upon the growing wheat. After it reaches the fly state it is harmless, and instead of being alarmed at the presence of the *fly* in his wheat, the farmer may assure himself that the *danger* is then *over*, and his enemy is on the retreat. The damage has been done, and he need apprehend no further depredations. It is true, he may find even after the fly form is developed, a falling away and dying of his wheat, but this is the consequence of injury done to the stalk or root, by the insect while in the chrysalis state; so the branch of the tree in which the locust has deposited its eggs, does not immediately die, but appears healthy for some time, but it finally falls from the wound which has been inflicted upon it.

We may pursue this investigation still further, and shall meet with other phenomena tending to the support of the theory here advanced. The experience and observation of large dealers in flour will assist us with some interesting facts. They all dread what is called the *changing season*, when they happen to have large stocks of flour on hand. This season occurs from the latter part of July to the end of September, when the flour which has been ground some time previous is apt to pass through a change, by which its wholesome and nutritious properties are either lost or materially diminished, and it becomes sour or musty.

There is at this season and when these changes take place in the flour, the most unequivocal evidence of the presence of animal principle, which is developed in the form of worms. These are are sometimes found in the midst of the barrel of flour, but mostly around the surface, where the air has had access to it Every house-keeper is familiar with these troublesome and disgusting visiters in her flour barrel, if she has it on hand in the changing season. This fact is not to be accounted for upon the supposition of a previously deposited egg in the wheat; but it shows clearly the extraordinary tenacity with which the animal and vegetable principles adhere together, that the tearing of the grain to pieces in grinding, the process of sifting, bolting and packing, are not sufficient to destroy the animal vitality. The egg system would find it extremely difficult to sustain itself under such violent operations.

The next and last stage of the enquiry leads us to the experience of the shipper of flour. Flour shipped to hot countries is particularly liable to pass into the sour and musty state, and it is then sold at a great loss to the shipper. To remedy this, became a matter of great importance to shippers of that article. The French adopted, long ago, the plan of lining the inside of their barrels with paper, which no doubt has the effect to preserve the flour in a dry state, and thereby delay or postpone the change of the flour—but still the worm would appear, and this was considered almost as bad as its being sour or musty.

But the most efficient agent which has yet been discovered in preserving flour from these changes, and these worms, is a *dry artificial heat!* strongly applied to the grain before grinding. This process is well known under the name of *kiln-drying*, which has the effect so far to change the properties of the grain, that the flour will bear the action of those heating climates of the West Indies and South America, for a much longer time than flour which has not undergone this process. And for this reason, I am told that the flour made at those mills where the kiln-drying process is uniformly practiced, will oversell any other flour by two dollars in the barrel.

Now the question is, what is the effect produced upon the grain by exposing it to the action of the kiln heat? That the grain is materially changed cannot be denied.

There is but one way that I can conceive of, in which this can be explained, and it is this. The strong heat applied to the grain, some how or other, destroys its animal principle, and thereby materially diminishes its tendency to become sour or musty when ground into flour. It seems reasonable to suppose that it is the animal portion of the grain which has been interfered with, since that is the first of its properties to quicken under the action of a moderate degree of heat, as may be seen at any time in a bank of wheat which becomes heated. I will here remark too, that the garden pea may be made to develope its insect much sooner than it usually does, by placing it in a situation where it will be acted upon by a moist and heated air.

But whilst the kiln-drying process gives to the flour the advantage of resisting the action of an unfavorable climate, it deprives it of one of its vital principles, and leaves it less wholesome and nutritious.

If this theory of the origin and nature of what is called the Hessian fly is well founded, then it is apparent that the farmer has no way left him of eluding its ravages, but by a diligent attention to the proper cultivation and manuring of his fields. A strong and vigorous growth is the only safe guard against this mischievous devourer. And here we may admire the wisdom of our bountiful Creator, in placing this little insect at the very foundation of the staff of life. Man cannot live without bread, and in order to secure that necessary of life, he is obliged to employ diligence and industry, or the *worm* will take his bread from him; and while these secure him against the foe of his crops, they likewise act as guards upon his virtue, and preserve him from those vicious habits of which idleness is the very hot-bed. But will not this prosperous cultivation finally defeat the very end named, viz. that of protecting man's virtue by industrious employment? Suppose his fields are enriched and cultivated, so as to produce yearly the most abundant crops, the increase would so far transcend consumption as to become an incumbrance, and of no value. Man would then leave his fields and give them over to the briar and the thorn, and perhaps abandon himself to indolence and its consequent vices.

But such a condition of things is also most wisely guarded against, and just as often as an over-ruling Providence sees fit, unfavorable seasons are brought in, and the loaded fields just ripe for the harvest are blasted and lost. But this is no loss to the great agricultural interest of a country. The diminished crop of the present year enhances the value of the next year's product-, and with this assurance the tiller applies himself again to his labors, ploughs and sows in hope, and finds that his crop of the next year more than compensates him for the loss of his previous year's harvest, by the increased price it brings him. All things are thus equalized, and the ways of Providence made consistent with man's best interest in this world, and the blessings of industry are secured to the industrious man. But as I know that you have felt the annoyance of the fly in your fields heretofore, I will not annoy you with my speculations upon it any longer. Very truly, your's, SAMUEL MCKENNEY.

Georgetown, D. C., June 10th.

Extraordinary Sale of Tobacco.—Yesterday 3 hhds of Tobacco were sold at the Public Warehouse, raised by Mr. L. Hall, of Fluvanna co., for the following prices, at private sale, by the inspectors:—No. 1, at $28; No. 2, $10; and No. 3, lugs, at $3. They were immediately re-sold to Mr. Jas Gray, at $35. $15 and $5—and before 2 o'clock of the same day, Mr. Gray sold the No. 1 hhd. to Mr. Poitiaux Robinson, of this city, for $40! per cwt. As we profess to be a judge of good tobacco, we unhesitatingly pronounce it No. 1, not only on account of its general appearance and quality, but for its remarkable sweetness. Mr. Hall deserves great credit, as it is the best tobacco brought to this or any other market for many a day. —*Rich. Whig, June* 26.

LICE ON POULTRY.—I have seen a number of recipes in the Cultivator lately, for destroying hen-lice. Any person that will try oil-cake meal, according to the direction in one of the back numbers of the Cultivator, I think will not be troubled with them. I had a hen-house last season, about 12 feet square, in which I kept 60 hens, the most of the time shut up, and the lice became so thick that I could not go into it without being almost covered with them. I took two quarts of oil meal, and sowed it with my hand, throwing it all about the house and nests, and I was not troubled with them afterwards. I used six quarts in the course of the summer—two quarts at each time; but I do not know but once would have answered, as I saw no lice after the first time I used it, and I did not clean out their house or nest in the whole summer, which should be done two or three times. A SUBSCRIBER.

Poughkeepsie, April 18, 1843. [*Alb. Cul.*

From the Transactions of the N. Y. State Agricultural Society.

On the most Profitable Variety of Sheep—Root Culture.

By Wightman Chapman, Middlebury, Vt.

I have raised sheep for twenty years. My flocks have numbered from four to seven hundred sheep, most of the time about five hundred. I have bred the Native, Saxony and Merino sheep. The best breed I have raised, is one-half blood Saxony, the other half Merino. In this opinion I shall not coincide with many distinguished sheep-breeders; but from experience in raising Saxony sheep twelve years, and having tried the above named cross, I am satisfied that they will yield as great a quantity of wool when they have an equal amount of feed, as any other breed with which I am acquained, and that of a much better quality; I wish to be understood what kind of Saxony sheep I would have to breed from. Mine were bred from the flocks of Mr. Grant of Walpole, N. H. Twelve years since, we selected one hundred ewes from his valuable flocks. Three years they sheared on an average four pounds of wool per head each year; the fourth year they sheared three pounds fourteen ounces. Their keeping was good hay, with a small allowance of roots from the first of February to the first of May, and good feed in the summer. At the end of the fourth year, they were sold for $800. They were selected entirely for their build, having broad shoulders, short legs and necks, heavy bodies, and were well wooled upon the legs and heads. The bucks, which were imported, we procured at Boston. They were inferior to the ewes in every respect, except fineness of fleece; and here was where so many with myself failed; for the valuable qualities of the ewes were all sacrificed for a little finer coat; and after different persons had selected from my flock the bucks that were then pronounced best, the more valuable ones were left. The effects of such breeding evidently soon began to show itself in light fleeces and weak constitutions.

I have commenced breeding from the increase of the above named ewes with Merino bucks that have long thick wool, but not so course as most Merino sheep we have about here, and have more than realized my expectations; the lambs have heavy fleeces of good quality, and are well built. I have observed the different crosses that have been made in this town with these backs and Merino, Saxony and Native ewes; all of which prove that we can get lambs from the Saxony ewes that will shear more wool, than from either of the others. The sire of these bucks was brought from Long Island when one year old; and although he will be 11 years old next spring, is as active and in as good condition as any buck about here, and tups about 150 ewes yearly. His lambs are superior to any other we have with us. He sheared, when in his prime, about eleven pounds. He has been in this town three years; the oldest bucks we have from him are two years old, and sheared last spring from seven to nine pounds, yearlings from five to seven pounds eight ounces. He is supposed to have some Saxony blood, but how much is not known. There are a great variety of other breeds of sheep here; among which are a breed from Wallingsford in this State; they are sometimes called the Paular Merino, but they are not at all similar to the Paular Merinoes I have seen from the flock of Consul Jarvis, being much larger and coarser. For mutton, they are undoubtedly superior to most breeds we have here; but for wool, I think inferior to many others. The sheep I have seen from the flock of Consul Jarvis, are very nice, having wool of good quality; I think bucks like the one I mentioned as coming from Long-Island, would improve them, and produce as valuable a breed of sheep as could be procured.

Attention to breeding will not make good sheep, if they suffer for the want of care through our long winters. They should have good sheds to protect them from cold and wet weather. Old sheep should be foddered twice each day; giving them as much as they will eat at 8 o'clock, A. M., and at 3 P. M. They will do without water if they have plenty of clean snow; roots will promote digestion, and are preferable to grain for either ewes or lambs. The latter should be foddered three times each day, and have water. We have raised mangel wurtzels and sugar beets ever since they were first introduced into this country. We now cultivate the beets in preference to the mangel wurtzel, and usually plant about two acres of beets and carrots and about one-half acre of ruta bagas. We consider beets, much better than any other feed for fattening cattle, milch cows, working oxen, calves, horses, store and fatting hogs and sheep. We have fattened heifers on beets, that weighed when two years and six months old, 800 pounds, and had 135 pounds of tallow. The beef is much more tender and juicy, and also much sweeter than when fatted with meal. A man in this town fatted a hog which weighed when dressed, 600 pounds; his age was 20 months, his feed was mostly sugar beets, with meal, the last two or three weeks. I am surprised that roots are not more extensively cultivated by our farmers.

The Cultivator vs. Plough.

Some of my agricultural brethren, I preceive, are recommending the *plough* in preference to the cultivator, as an assistant in weeding and hoeing corn. This may be well enough for theorists, but no one I feel confident, who has for years been practically familiar with the operations of the two instruments, and who instead of indulging his spleen in wantonly attacking every practice which he has not the honor of inventing, had studied the laws of nature and the physiology of plants, as connected with the subject under consideration will thus contend. In the first place it is asserted that the cultivator "buries no weeds," and that it does not go deep enough. This is about as true as that the Moon shines by day, and sun by night; for no one who has managed a cultivator on old lands, can be ignorant of the fact, that unless the soil be remarkably stony, the cultivator will bury ten weeds where a common horse-plough will bury one. It will also stir the ground to as great a depth, and instead of loosening only a strip of a foot in width, it will thoroughly lighten the entire soil from row to row. I have used both instruments on the same piece, in the same season, and what the mere theorist seldom does—I superintended the operations of both with my own hands. Again it is said by those who prefer the plough, to the cultivator, that the objection usually advanced against the former, viz:—that it breaks and scarifies the roots of the corn, is of no consequence whatever, as they are speedily reproduced, and after the ratio of ten to one. Now if this reproduction were immediately, the injury resulting from this fool hardy practice of wholesale mutilation might be less an evil than a benefit. But I have never seen a plough (and unless this sapient theorist has one of his own invention. I fear I never shall be gratified by the sight of one) which, like the fabled spear of Achilles, could heal the wounds —even though directed by an editor's hand.

Again we are told that ploughing within "an inch of the corn," is advisable. The writer means this, I suppose, as a general direction, as he has made no exceptions, whatever, to the rule, and as he imagines so rapid a reproduction of the rootlets, he might, perhaps, with equal wisdom, reduce the distance to half an inch. When any one will demonstrate, logically, that a horse-plough, running upon an average probably, to the depth of 5 inches, may be run within *one inch* of a corn hill without great and irreparable injury to the tender plants, then shall I be prepared to believe that trees may be grown as rapidly and successfully without a system of roots as they can with, and not till then. To every one who has the two instruments, I say, unhesitatingly, make use of your cultivator in preference to the plough. No matter how much you stir the surface of your corn-fields, but beware of ploughing off the roots! Let the surface also be kept as level as possible; all hilling up, though long sanctioned as one of the time-honored, and venerated traditionary usages of our sires, is unquestionably an injury to the crop. As to the "corn planter," so much lauded by the organs of our seed and tool establishments, I have no opinion to express.

Where the soil is favorable I prefer planting corn after the old method, drawing furrows both ways, in order that the cultivator may be passed frequently through the piece both longitudinally and transversely in order to ward off the ill effect of drought, and more effectually to eradicate and inhume the weeds which obstructs its growth.—*Maine Cult.* W.

The Peach Tree.

From Mr. Downing's new Catalogue, we select the following "Remarks," which he has attached to his list of peaches. They should receive the attention of every grower of this delicious fruit.—*Alb. Cult.*

"Of late years, owing to the appearance of two diseases in our orchards, the Peach has become comparatively short-lived and unproductive. These diseases are yet scarcely at all understood by the majority of cultivators. We therefore offer the following suggestions, with the knowledge, that if appreciated and carried into practice, this fruit will be found as healthy, fine and productive in our gardens now, as at any previous period.

I. The *Yellows* is the greatest malady of the peach. It affects the whole tree, and the seedling reared from it are also more or less diseased in the same manner.

II. The *Yellows* is a *contagious* disease, spreading from tree to tree gradually, and it may be propagated by grafting or budding from the infected specimens.

III. This malady may be infallibly known by the following characteristics: a decidedly *yellowish color* in the whole of the leaves of the tree; short and slender branches growing here and there, clothed with small, half-starved, narrow leaves, one fourth or one half the usual size; and mottled, small fruit of inferior quality ripening before the proper season.

IV. A single tree with this disease will, by its contagious influence, gradually destroy a whole orchard of healthy trees. No pruning or mode of treatment, hitherto discovered, will restore to a healthy state a tree thoroughly diseased with the Yellows.

V. It is absolutely necessary to *destroy all trees having the Yellows*, in order to insure a sound condition in young plantations yet healthy. In small gardens, where there are diseased trees contiguous, the neighbors must be prevailed upon to enter into the plan: in farms and larger places, it will generally be sufficient to destroy all victims of the Yellows on premises, as the disease spreads slowly. In trees received from nurseries, there will frequently be found an infected subject, and it should be at once rooted, and its place supplied by a healthy tree. It is much better to destroy a single tree, though young, at once, than by allowing it to stand, in the vain hope of its recovery, to spread disease among all in its neighborhood.

If we direct our attention to this matter, we shall find in almost every neighborhood, a number of sickly and diseased trees, which, although worthless, are allowed still to occupy the ground. Very frequently an old favorite tree, now *lean and jaundiced*, occupies, year after year, a corner of the garden, more from the recollection of the fine fruit it once bore, than from any present value. If we desire healthy and thriving peach trees, all these diseased specimens, old or young, must be entirely exterminated. While these are allowed to stand in any garden disseminating a contagious disease on every side, it is idle to hope for healthy and long-lived trees.

The second enemy to this tree is the *Peach worm* or borer. This insect (*Æcria exitiosa,*) deposites its eggs in the soft part of the trunk, just at the surface of the ground. These, on becoming borers or grubs, perforate and consume the bark, and in time girdle and destroy the tree. To maintain an orchard in good health, so far as regards this insect, it is only necessary, every spring, to remove the earth for three or four inches at the base of the tree, and to cut out and destroy with the knife every one of the borers. Their presence is generally indicated by gum just below the surface of the ground, and a little practice will enable a man to go over an orchard of an acre in a day.

The productivess and longevity of the peach tree, will be greatly promoted by shortening or pruning the extremities of the branches of bearing trees, from one to two feet in July, every year. This will keep the tree full of bearing buds and healthy wood."—*N. E. Far.*

More Use for Porkers.—The Pittsburgh American says—"Something new comes to us every day. At Cincinnati, they have commenced the manufacture of a very neat and useful article of floor and hearth cloth, from hogs bristles or hair. They are first softened by immersion for a given time in lard oil, and then spun and wove into cloth, with the different arrangements of natural colors that fancy dictates."

Beans for Sheep.—If you have any beans on hand which are unfit for culinary purposes, in consequence of being mouldy or rancid, wash them carefully and give them to your sheep. There is nothing, perhaps, that sheep more admire at this season, and a gill a day will be of more benefit to them than a pint of corn. It is frequently the case that beans are injured by wet before harvest, or by being stowed away damp, become mouldy and unfit for use. In this condition they are often sold for one half their value, which we consider equal to the best corn in any state. The vines and pods of beans are also an excellent feed for the sheep, and should be as carefully husbanded by the farmer, as his corn and hay.—*Maine Cultivator.*

THE AMERICAN FARMER.

PUBLISHED BY SAMUEL SANDS.

THE WHEAT FLY.—The *essay* of Mr. *Saml. McKenney* upon this insect, which will be found in another part of our sheet, is as able as it is bold, original and ingenious. The writer has studied the subject well, followed the insect through all its habitudes; and though the reader may rise from the perusal of Mr. McKenney's paper without subscribing to all of his *opinions;* though he may not acquiesce in his *theory*, yet we conceive there will be but few readers found, who will be unwilling to admit that the author has displayed a degree of research, patient inquiry and analogical reasoning, rarely to be met with in productions of the kind. We repeat it, the *essay* of Mr. McKenney is able, bold, original and ingenious, and we must here be permitted to express the hope, that we shall be often honored by communications from him upon kindred subjects; for a mind like his—one so capable of conducting inquiry and so competent of analyzation—should not be permitted to slumber while there is so prolific a field for its labors as that of agriculture before it.

SHEEP AND ROOTS.—We take pleasure in copying today from the *Transactions of the New York State Agricultural Society*, a very interesting essay by *Whiteman Chapman*, of *Middlebury, Vt.*, on the most profitable variety of sheep, and the root culture. It will be perceived that the writer gives the preference to a cross between the Saxony and Merino, and it is very possible that in the meridian of *Vermont*, where *wool* is the chief object, and its value enhanced by *fineness* of texture, that the view he entertains is correct, but in those portions of our country where *mutton*—quantity and quality of meat—enters so largely into the elements of appreciation in the raising of sheep; and where the wool is chiefly used for the coarse fabrics of farm clothing, we should think that the long wooled breeds would be preferable, and in that case, that the Leicester and its grades would be the preferable breeds. Where a finer quality of wool might be required, a cross between these and the Southdowns might be desirable, as in such crosses, a melioration of texture in the wool, without a very material diminution of size of carcass, would be the result. These suggestions appear to us appropriate, and we throw them out leaving it to the judgment of the reader to make his own estimate of their value.

CLAPP'S PULVERIZER.—The *Boston Cultivator* speaks thus of an agricultural implement recently invented in that quarter, bearing the above title. We know nothing of it except what we glean from the paragraph below, but if it really is what its name imports—a thorough *pulverizer* of the soil—then, of a truth, it is a good implement; for, to *thorough pulverization*, is the success of the farmer as much indebted as to almost any thing else:

Clapp's Pulverizer.—We would again call attention to this implement, described by our correspondent week before last. We have examined a model, at D. Prouty & Co's, No. 20 North Market street, and it appears well calculated for thoroughly working and pulverizing the soil, and we doubt not that when once introduced it will be regarded as one of the most valuable farm implements. The cost of this implement, well made of substantial materials, will be about 10 or 12 dollars. Farmers will please examine and judge for themselves of its utility.

FARMING IN SCOTLAND—IMPROVEMENT OF WET LANDS.

It is always profitable for Agricultural communities to borrow whatever is good from each other, and especially so, when their customs and modes have been submitted to the tests of long tried experience. Such at least is our opinion, and so believing we shall abstract from an article in the London Farmer's Magazine, the substance of the notice by a tourist, of improvements wrought by a Mr. Robertson on a farm near Kelso, Scotland, by means of draining, a mode of improvement by the by too little attended to in our country

The occupier of the estate in question had occupied it for forty years, but it was only about three years since that he commenced his system of draining. His son by accident happening to fall in with Mr. Smith, of Deanston, the great drainer, and being satisfied by the conversation of that gentleman, of the benefits arising from drainage, the father, from the representation made to him by his son, entered into his views, and has since that time drained the length of 71 miles on his estate. The drains are what are called *under*, or *covered drains*, the smallest of which are 2½ feet in depth; nearly half of these drains are partly filled with small stones.* The stones are covered with turf, furze or straw so as to prevent the filling up of the water course by the earth, and then the drain is filled in with earth In this country, where turf could not be conveniently had, a covering of branches of cedar, hemlock, or the Pine, freshly taken from the trees, would answer possibly better than either turf or furze, as we think they would be equally effective in keeping the drains open as the first, and much more lasting than the latter. In making such drains, a depth between the materials and the surface, should be preserved, of at least 12 inches, so as to allow full scope to the plough without disturbing the materials of the drains.

The drains on Mr. Robertson's estate were placed at a distance of 30 feet from each other where the land was porous, and 15 feet in stronger land. They all fall into *main* drains, which are a little deeper and considerably larger, which affords more space for the water to pass off. These large drains have openings at different distances from each other, through which the water in the open ditches flows into two large reservoirs, which collect sufficient water to work a threshing machine. The construction of these cost more than £280.

To show the spirit and enterprise which prevails in Scotland, we will state, that Mr. Robertson has already expended £1500, and expects to expend £2000 more before he will be able to get rid of the superfluous water. In three years he has used £2000 worth of *lime*, having applied it at the average rate of about 125 bushels to the acre, being, in money, about £4, or $17.75 per acre for lime, *besides* £11, or $48.88 in drains, per acre, which is together $66.66 per acre, a sum equivalent to the *fee estate* of 3 acres in most lands in this country. But this is not all; for independent of the sum expended in these two items of permanent improvement, there is to be added for every rotation, an extra expenditure for 16 bushels of crushed bones, of £2.10, or $11.10. Mr. Robertson told the tourist, that he calculated expending £1500 more for *lime;* that he should lime again at the expiration of 4 years. And what is stranger than all to an American, the free hold of this farm in not in Mr. Robertson, he being merely a *tenant*, on a lease of 23 years, 11 of which had already expired.

To an American tenant and landlord, it will appear marvellous, indeed, how any man in his senses could expend so much money in improving a farm that did not belong to him; but we have no doubt at all, that Mr. Robertson has already, and will continue to find his interest promoted by every dollar he has, or may expend in improvements and manure of the kind, as every acre drained and limed will yield double its former product.

The farm occupied by Mr. Robertson comprises 1250 acres, and to give an idea of the extent and character of his farming, we will state that a very considerable portion of the farm is pastured by sheep, a cross between the Leicester and Cheviot. His flock consists of 1200 sheep. At 2 years old they weigh from 88 to 100 lbs., and average nearly 7 lbs. of wool per fleece.

He sells his fat oxen at 3 years old, after having given them turnips and 4 lbs. of Linseed Cake per day, from October to March, and sometimes even to May. He fattens all he raises, but buys 2 year old oxen and calves just dropped; the latter he feeds on skimmed milk, with the jelly and grain of linseed. Every year he sells 40 three year old oxen, 30 two year olds, and 20 yearlings. He keeps only 8 cows, 20 working horses, 6 colts, and as we have before stated, 1200 sheep on a farm of 1250 acres.

The rent of the Land is 18s. 6d. per acre, equal to about $4.10 of our money. He has 350 acres in grain. Twenty-six bushels per acre, of all kinds of grain is reckoned the average product of the neighborhood, though from the prospects in April, when the article whence we take this abstract was written, it was expected that Mr. Robertson's crop would be much more the present year: he expects to obtain 30 bushels of Wheat and 36 of Barley, and the same quantity of Oats per acre.

The policy of long leases is very happily illustrated by the fine spirit of enterprise and improvement manifested by this intelligent Scotch farmer. We call him *intelligent*, for we believe he owes his success altogether to that intelligence which enables him to look *beyond the present into the future*, and behold in *advance* the profits which are to enure to him from judicious, well conceived, and well conducted improvements, looking alike to the present and the future. Seven out of ten men would decide that because the land was rented, he must do nothing for it, beyond what was necessary to make the current crops grow; that he should put nothing on the land, but what he could take out in a crop or two. This we say would have been the reasoning of the majority; we know it would; for we have heard it and reasoned against the impolicy of it time after time, until we have become hoarse from waste of words. But we must admit, that there is a difference between the *tenures* of rented properties here, and those in Britain. *Here* few leases extend beyond three, five and seven years, and many more not beyond one and two years. So that the same inducement is not held out to tenants in America, to expend their means in any but transient fertilizers, as it is in the very nature of men, to look at their *own* interests and not at those which belong to *others*—to sow with a view of reaping for *themselves*, and of not permitting their landlords to profit by the fruits of their toils. In view of this rational aspect of affairs, we have always thought that land proprietors pursued a short sighted, if not suicidal, policy, in letting their farms upon such *short* leases, and that the term should be so extended as to create a sufficient inducement for the tenants to give to their improvements a more permanent character. Indeed, were the *tenures* of leases *here* as they are in *Great Britain*, for twenty one, or twenty three years, or for one or two lives, as is frequently the case, the proprietor might, with propriety and reason, stipulate in his lease both for drainage and liming. If such were the case, as it should be, men of means and enterprise, would be willing to become tenants, and proprietors would no longer realize, as they now do, the mortification of finding, after two or three occupancies by as many tenants of their farms, that all their fertility had become exhausted. The impolicy of short leases have been made manifest to us upon many occasions, but upon one most strikingly so in 1839. We recollect to have stopped at a farm, during the harvest of that year, which we had known twenty years before, and when in possession of its *then* owner. When we first knew it, it was remarkable for its productiveness, and had

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* When stones are not convenient, a very lasting drain may be made by laying down on each side of it pieces of chesnut boards, cedar or any other desirable timber, about 6 inches in diameter, and placing billets of the same wood, or of plank, crosswise, and then putting evergreen boughs, or straw thereon before filling up the drain with earth.

all the materials of keeping up its fertility on its shores, in its fields, and in its woods; for the first was lined periodically with sea-weed, some of the second stored with oyster shells, and the third with inexhaustible supplies of leaves; but as the tenant held his lease from year to year, he had never resorted to either resource, and the consequenee was, that the same fields which twenty years before we had beheld bearing most luxuriant crops of Wheat, Rye and Oats, presented an aspect of poverty which chilled the very blood within our veins, and made it creep in slothful motion, instead of course with its wonted healthful action. This is a subject that interests every cultivator of land, whether he be landholder or tenant, and should be not only inquired into, but inquired into with a firm and unflinching determination, *to effectuate a remedy.* The interests of all parties require it, and we fondly hope, that the remarks we now make will lead to such practical results, as will produce a change favorable to all concerned.

From the Richmond Southern Planter.

Bommer's Manure.

We know of no invention that has excited more curiosity than Mr. Bommer's new process of making manure. We have had hundreds of applications upon the subject, and we have returned but one answer to all the applicants, viz: "We have no personal knowledge upon the subject, but we have put the matter into the hands of a gentleman in this neighborhood, to be thoroughly tested by him, and his report, whether for good or for evil, will be published in the July number of the Planter." This report, which we are happy to find is of the most satisfactory character, is contained in the letter below from Mr. Woodfin. It is unnecessary for us to say any thing in this community of the standing and respectability of this gentleman; to those to whom he is unknown we will say, that we selected him as one of those individuals whose testimony would go as far as any body's. Mr. Woodfin is also known to most of the readers of agricultural papers for his skill and science in agricultural chemistry, to which, of late years, he has devoted much of his attention.

For the Southern Planter.

Mr. Charles T. Botts:

Dear Sir,—Having been requested by you to give a candid statement of my opinion of Bommer's patent method of making manure, for publication in your July number of the Planter, I will now with much pleasure proceed to say all I know about it.

On the 13th of May at night, I finished the preparation of a heap, according to his method, composed chiefly of dry wheat-straw, to which I added a small quantity of coarse unfermented stable litter, which was also, mostly, wheat-straw, and proceeded to treat it according to the directions laid down in his pamphlet. On the 18th day after the heap was constructed, it was opened in the presence of a number of farmers, and other gentlemen feeling an interest in the matter. It was found not to be entirely decomposed, but in a high state of fermentation, which gave evidence that entire decomposition of the materials would very soon be the result: in order to facilitate it, however, I gave it another watering with the lees, which has effected the complete decomposition of the whole mass.—According to Mr. Bommer's method, entire decomposition should have been effected in fifteen days, and I have no doubt such would have been the result, if it had been conducted with more skill; up to the tenth day, I had succeeded in producing a very high degree of heat; on that day, I gave it a copious watering, thereby adulterating the lees too much, which caused the fermentation to subside in a measure. If the third watering had been properly made, with the lees in sufficient strength, I have no doubt the result would have been more satisfactory. As it is, I have succeeded in thirty days, in accomplishing that which I could not, by any method known to me, have accomplished in six months. I have never used any of this manure, this being the only heap I have made, I cannot, therefore, speak of its effect on vegetation; from its appearance, however, and my knowledge of the materials used in its manufacture, I should consider it of far greater value than the best stable manure, made in the usual way; I would not now exchange mine, load for load, for the best I ever saw.

This method, as Mr. Bommer justly observes, has the advantage over all others by enabling the farmer to have his manure when and where he wants it. I shall make another heap in a few days, mostly of green weeds, grass roots, &c. &c. when, if you desire it, I will give you the result.

To make manure by this method is not costly, but somewhat troublesome; but what good thing can be obtained without trouble or expense?

I have thus, sir, given you a candid statement of all I know at present about Bommer's patent manure,

And remain, very truly, yours,

Geo. Woodfin.

June 13th, 1843.

From our conversations with Mr. Woodfin, we know, that this report is, as it should be, as careful and guarded as possible. He felt the responsibility of the task imposed on him, and determined to say nothing, however sanguine his anticipations might be, that could, by possibility, induce the public to think more of this invention than it deserved. For our own part, from what we have seen and heard of this experiment, we feel authorized to say that, which we never felt at liberty to say before, that we are full satisfied of the great value of the invention. We do not doubt that a certain degree of particularity is required in following the directions that does not belong to some men, and which would deprive them of the benefit of the method, at least to the greatest perfection; so there are some persons, as every physician will tell you, who cannot be induced to administer three successive doses of medicine according to the simplest prescription. But in the hands of any farmer who will strictly follow the method as it is explained in Bommer's pamphlet, this invention we believe is worth ten times the price at which it is to be obtained.

Mr. Woodfin speaks of the method as being "somewhat troublesome." We wish he had been more explicit on that point: large quantities of water are used in the process, and Mr. Woodfin's heap was so situated as to make the application of this material laborious; but, nine times out of ten, it may be so located, that any quantity of water may be conducted to it with little or no labor at all: we do not know, but think it likely that it was this portion of the process, that Mr. Woodfin chiefly alludes in the expression quoted.

As to the time required exceeding that specified by Mr. Bommer, it must be remembered that this was the first experiment in a process entirely new, where the operator, without any experience, was compelled to rely wholly upon the printed directions contained in the pamphlet. Mr. Woodfin does not doubt, that, by avoiding an error committed in the first process, the result could be effected in the time required.

If the chemical properties of this compost are what Mr. Woodfin supposes them to be, of which he is much more capable of forming an opinion than we are, if it is indeed superior to stable manure, it is hard to estimate the value of the invention.

From the Boston Cultivator.

Apple Worm—Curculio—Plum Grub.

Cambridge, June 7, 1843.

Mr. Editor:—The *apple-worm*, as it is commonly called, and the *whitish grub*, that is found in plums are two entirely different insects.

The former is a kind of caterpillar, is provided with sixteen legs, and like other caterpillars, has the power of spinning silken threads, wherewith it makes its pod or cocoon when it leaves the wind-fallen fruit. It changes, within its cocoon, to a chrysalis, and finally to a little brown miller or moth, flecked with numerous greyish spots, and having a large oval copper-colored spot near the end of its upper wings. The moths lay their eggs in the apples in June and July, and from the eggs are hatched the common apple-worms, which causes the fruit to fall before its time.

The grub in the plum is much smaller than the apple-worm; it has not any legs; and it does not spin a silken thread. Very soon after the fruit falls from the tree, the grub, within it, goes into the ground, where it remains till it is changed into a little brownish hard-shelled beetle or curculio. These curculios may be found on the trees from the first of April to the middle of June, at which time they sting or pierce the plums, and lay their eggs in them. They are easily caught in a cool morning, by spreading cloths under the trees, and suddenly jarring the limbs, by which they are so much alarmed that they drop down apparently lifeless, and might then be mistaken for so many little dead buds. Soon, however, they begin to stretch out their legs and to crawl, and, unless immediately secured in a tight vessel, will make their escape.

Allow me to refer you to my "Treatise on Insects injurious to Vegetation," pages 66 and 351, for further particulars relative to the history of these two kinds of insects.

Your most obedient,

T. W. Harris.

From the American Agriculturist.

Remedies against the Turnip Fly.

As the cultivation of the different kinds of turnip is becoming somewhat extensive in the United States, and wherever adapted to soil and economical feeding, is a valuable crop, a few hints for their protection against enemies may be useful. The principal danger to the turnip plant is immediately after it appears above the surface of the ground. There are a variety of insects that feed upon and destroy it during the first few weeks of its existence; but its most considerable enemy is a small black bug, that seizes upon the tender cotyledons the moment they make their appearance. When the enemy is not in sufficient force to consume all the young leaflets as they appear, the plant will make a gradual, though slow progress; and when so far advanced as to be able to put forth its larger and more fibrous leaves, it will generally reach maturity. But it must be remembered that any diminution of its leaves, especially in its early existence, is prejudicial to its growth. The leaves are to plants what the lungs are to animals, and in nearly all cases they superadd, in no small degree, the functions of the stomach also; for in addition to throwing off a portion of the surplus moisture, oxygen, &c., taken in by the roots, they absorb carbon largely from the carbonic acid of the atmosphere, which becomes fixed in the vegetable as a large proportion of its matured substance. Of course the early leaves of all plants should be protected with the utmost care.

For the protection of the turnip, I have found no more efficacious means than soaking the seed in the *most offensive tanner's oil* for two or three days previous to sowing. This saturates the seed with the repulsive taste and odor, and as the germ which first appears above ground, is furnished *exclusively* from the seed, the cotyledons, which are most exposed to the insect, are charged with a flavor every way adapted to their protection from its ravages. In addition to this great advantage, the oil is one of the most nutritious substances for the support of the young plant, and helps it forward with a rapid growth, by which it sooner gets beyond the reach of danger.

Phosphoric acid, in the proportion of 1 part of acid to 2 of water, forms a steep or soak which gives wonderful accelleration to the growth of the plants: soak in this 20 to 50 hours.

After soaking, the seed can be prepared for sowing, by mixing with plaster, ashes, or air-slacked lime, so intimately mixed, as to obvivate any inconvenience from adhesiveness of the seeds.

If the insect is found to pursue the plants afterward, they may be sprinkled with stale liquid from a tanner's lime pit. This is most conveniently done with a common watering-pot. If a tanner is not accessible to the farmer, he may easily prepare any desitable quantity of liquid, equally valuable, by collecting stale urine and the strongest drainings from the dung heap, in large hogsheads, or what is better, in permanent cisterns, which should have a place in every farm-yard, adding lime in proportion to the quantity of liquor. The addition of putrid flesh, fish, &c. will add to its efficacy. A weak brine, diluted sulphuric or nitric acids (oil of vitriol and aquafortis,) may be sprinkled over the plants with success. Unleached ashes, lime, plaster, and soot, sown broadcast over the plants after a rain, or while the dew is on, are sometimes effectual remedies. In addition to the value of the above applications for killing the insect, they are all directly beneficial in promoting the growth of the plants, to the full value of the cost of the material and labor.

Folding sheep on the grounds where turnips are to be sown is is an excellent preparation. New land, when it can be had, is admirably adapted for a turnip crop, as it is free from insects, and possesses an abundance of the alkalies, which are every way suited to the rapid growth of the turnip. Burning the rubbish on the land required for this crop, is a good precaution, as thereby a portion of the eggs and insects are destroyed. Deep plowing will exterminate all that are placed so far beneath the sur-

face as to be unable to reach it again. The use of long manure, or sowing on a stubble field, are objectionable, as they harbor and protect the insects.

Where enemies are numerous, 3 or 4 pounds of seed should be sown in drills, and twice as much more broadcast, which affords more food for the fly, and there may possibly be sufficient left for a crop, after supplying the foragers with all they want; the excess, if any, may be thinned with the cultivator and hoe. But in all cases the soil should be in good condition, and be prepared with some rich, stimulating manure, such as night-soil or other concentrated aliment, by which the plant will be enabled to push itself rapidly beyond the reach of marauders. Alternating turnips with potatoes, sugar beet, and other crops in no way related to this family of plants, (the cruciferæ,) is useful, by cutting off the supply of food to its enemies, by which it is starved out or compelled to shift its quarters for subsistence.

The frequent use of the cultivator and hoe is beneficial in disturbing and destroying the insects, besides materially assisting the growth of the plant. All family weeds, colewort, water-cresses, hedge-mustard, and the like, which afford food to the common enemy, should be carefully extirminated; and such other kindred vegetables, as cabbages, cauliflower, mustard, table and horse-radish, &c., should be cultivated remote from the turnip field, so as to afford no rendezvous for their perpetuation.

R. L. A.

STANDARD OF CHARACTER FOR PRIZE CATTLE.

Mr. Editor—Sir: It is generally understood, I believe, that the object of offering prizes for the best stock by the State Agricultural Society is to collect together animals from different sections and from different herds, that a comparison may be made by placing them side by side, that their merits or demerits may be fairly tested. A farmer, living in a remote section and not in the habit of visiting, except in his immediate vicinity, may suppose that he possesses the finest animals in the country, which is very natural, as he has probably never seen any better or perhaps equal, and his being much superior to those of his neighbors, he rests perfectly contented.

And now let me ask, how many of those persons generally selected as judges of stock, know what points are necessary to constitute a perfect animal, or one that approaches nearest? I must confess my own ignorance, and seek for information. At present, there is no rule or criterion for the government of the committee, and they are left to decide according to their whim or caprice. We want enlightenment on that subject; and for that purpose I coincide with the suggestion you made page 140, vol. i, of your paper, that the "chairman of each committee mount the rostrum, the animal or manufactured article be brought out before the public, and then the explanations for their decisions be set forth at large." "What a school would this be to the rising, ay, to the risen, generation. A person might learn more by attending one such day's exhibition, and explanation, than from studying books, and plates, and animals, unaided by the opinions of others, for a month."

At the annual meeting of the New York State Agricultural Society, in January last, the writer called attention to the propriety of "erecting a standard of character for every class of stock to be exhibited hereafter for prizes, and also a standard of form, and every point necessary to constitute a perfect animal, to be noticed according to its influence in the decision of the judges."

We will suppose for example, that the following should be agreed on as the points of horned cattle for comparison, and that the animal combining or possessing the greatest number of these points, shall be deemed most meritorious:

1. Head small, with a bright and prominent eye.
2. Horns small and tapering.
3. Neck small at the junction with the head, and gradually thickening to the shoulders.
4. Brisket broad, deep, and projecting well forward.
5. Shoulders full, and no hollow behind them.
6. Body deep, round, and capacious; back straight.
7. Loins broad, and wide between the hips.
8. Legs short, full, and muscular above the knee; small below.
9. Flanks well let down.
10. Tail set on even with the line of the back; small and tapering to the end.
11. Broad in the twist, and if a cow, large milk veins, and capacious udder.
12. Though last not least, soft silky hair, thin skin, and good handling of the flesh.

Other points might be given, but the above will exemplify my ideas on the subject.

Truly yours, C. N. BEMENT.

[*American Agriculturist.*

RULES FOR BREEDING.—Although there is a great discrepancy of opinion upon some portions of the mysterious art of breeding, the following precepts from the pen of one of the most distinguished anatomists in Europe, Professor Cline, are, we believe, universally received as established doctrines amongst those who have the best right to know; although dame nature sometimes amuses herself in setting at naught the most ingenious theories of philosophers.

When the professor objects to large bones he must not be misunderstood.—From the bone and muscle, strength is derived, and, we presume the greater the *quantity* of either, the greater will be the strength of the animal; but the quantity is not always to be measured by *size*; indeed, as Mr. Cline remarks, they are generally found in an inverse ratio. In some animals a much greater quantity, both of muscle and bone, is condensed into a much smaller space than in others, and this constitutes the great physical difference between the Arabian and their descendants, commonly styled "blooded horses," and those of other descriptions. The ivory of the blooded-horse will always *outweigh* though it will never *outmeasure*, the open porous bone of the cart horse. But where the density of fibre is equal, size will indicate quantity, and therefore, strength.—With equal quality of bone and muscle, then, the largest animal will always be the most powerful. With this commentary we give to our readers the Professor's opinions upon the following subjects:

"*Muscles.*—The muscles and tendons which are their appendages, should be large; by which an animal is enabled to travel with greater facility.

"*The Bones.*—The strength of an animal does not depend on the size of the bones, but on that of the muscles. Many animals with large bones are weak, their muscles being small. Animals that were imperfectly nourished during growth, have their bones disproportionably large. If such deficiency of nourishment originated from a constitutional defect, which is the most frequent cause, they remain weak during life. Large horses, therefore, generally indicate an imperfection in the organs of nutrition.

"*On the Improvement of the Form.*—When the male is much larger than the female, the offspring is generally of an improved form. For instance, if a well-formed large ram be put to ewes proportionably smaller, the lambs will not be so well shaped as their parents; but if a small ram be put to larger ewes, the lambs will be of an improved form.

"The proper method of improving the form of animals consists in selecting a well-formed female, proportionately larger than the male. The improvement depends on this principle: that the power of the female to supply her offspring with nourishment is in proportion to her size, and to the power of nourishing herself from the excellence of her own constitution.

"The size of the fœtus is generally in proportion to that of the male parent, and therefore when the female parent is disproportionably small, the quantity of nourishment is deficient, and her offspring has all the disproportions of a starveling. But when the female from her size, and good constitution, is more than adequate to the nourishment of a fœtus of a smaller male than herself, the growth must be proportionably greater. The large female has also a greater quantity of milk, and her offspring is more than abundantly supplied with nourishment after birth.

"To procure the most perfect formed animal, abundant nourishment is necessary from the earliest period of its existence until its growth is complete.

"The power to prepare the greatest quantity of nourishment from a given quantity of food depends principally upon the magnitude of the lungs, to which the organs of digestion are subservient.

"To obtain animals with large lungs, crossing is the most expeditious method, because well-formed females may be selected from a variety of large size to be put to a well-formed male of a variety that is rather smaller.

"*Examples of the Good Effects of Crossing the Breeds.*—The great improvement of horses in England arose from crossing with those diminutive stallions, Barbs and Arabians; and the introduction of Flanders mares into this country was the source of improvement in the breed of cart-horses.

Example of the Bad Effects of Crossing the Breed.—When it became the fashion in London to drive large bay horses, the farmers in Yorkshire put their mares to much larger stallions than usual, and thus did infinite mischief to their breed, by producing a race of small-chested, long-legged, large-boned, worthless animals." [*Southern Planter.*

THE DAIRY.—This is the season for labor, care, and we hope success in the dairy. We have plenty of grass and cool weather, and we hope those who have the means will improve them to the best advantage. The first requisites, necessary for the business, are good cows. Every farmer knows what a vast difference there is among cows in respect to the amount of butter made from different cows, even if of the same age—apparently of equally good health and all kept alike. It costs as much to keep a cow that is of ordinary or poor quality as a good one, while the income is much less. The next requisite is a good pasture. In this, our farmers have not as yet taken much care. No experiments have been made among us that we know of that would serve to test the particular properties of this or that species of grass as it regards feed for dairy purposes, and yet it is evident that there must be a vast difference in the different kinds of feed, some yielding the proper material for rich milk, and some better calculated for other matters. The next requisite is a good dairy woman, or dairy man, it doesn't make much odds which, provided they understand their business; and the next, are the proper conveniences, such as a dairy room and utensils all clean, neat and "*handy.*"

We notice that some have recommended working the butter over by wooden ladles and not working it by the hand. We have no doubt that where this mode is followed faithfully it is good plan, but we have thought that the question of using the hand should be determined by the *constitution* or *temperament* of the person. Some persons who have a cool hand can and do work the butter over with great facility and leave it perfectly sweet and good, while others cannot handle the butter but a short time before it will grow soft and stick to the fingers on account of the heat of the hand itself.

There is no reason why our butter should not compete with any in the market. Good butter always commands a ready sale, while poor butter is not wanted, even at a small price.—*Maine Farmer.*

THE CROPS.—The Hagerstown (Md.) Herald of Wednesday last has the following paragraph in relation to the crops in Washington County:

The Crops.—Our neighbor of the Torch has drawn, in his last paper, a most gloomy picture of the wheat crops in this county. We do not think that these crops will turn out as indifferently as many persons anticipate. In some parts of the county, the wheat has suffered most severely from the ravages of the fly and the smut, insomuch so, that it is feared many fields will not produce the seed; but other sections, we are informed upon credible authority, present fields of the finest wheat that the eye ever scanned. From all the information we can collect relative to the wheat crop, we think we may safely say, that its yield will disappoint, at least in a measurable degree, the gloomy forebodings of those timorous persons who are anticipating an extensive failure.

Maryland Wheat Crop.—Nine-tenths of the Maryland newspapers declared about the middle of May last, that the wheat fields promised the biggest kind of yield. No farmer can tell in May what kind of crop he is to get. At the very time spoken of by the editors, the Hessian fly was ruining the farmers' prospect; and so now all the editors agree, that very slim crops of wheat wil be the farmer's reward for his labours for 1843.

On the Eastern Shore the wheat generally, is quite indifferent. Oats promise very well—Corn very small.

We were told the other day by one of the most experienced farmers in the neighborhood that his prospects for wheat and corn were never so bad as at present.—*Centreville Times.*

James River Tobacco Trade.—We learn from a letter in the Richmond Whig that twenty ships were lying in James River on the 14th ulto., taking in tobacco for Rotterdam, Bremen, Antwerp, Liverpool, Cowes and London. These vessels will carry out upwards of eleven thousand hogsheads of tobacco.

THE PETITION OF THE GARDEN WORK FOR JULY

most respectfully represents that she has been so despoiled of her beauty that she is ashamed to show herself to her mistress, and requests that she may be reinserted in a more perfect state, and she as in duty bound will ever pray.

Cabbages—These plants of yours look well. All you have to do is, to keep the ground well stirred once in two weeks, and the stalks hilled up, and we can promise you a good bed of them. But then, this is not all you mean to put out? No. Then, my dear sir, you must bestir yourself, and set out your plants the first rain, or they will not have time to head. And while you are setting out plants, don't forget to have a bed of *Savoys*, as they are the vegetable marrows of the cabbage tribe.

Melons, Cantaleupes, &c.—Your melons look well, and say, as plain as vines can, that you have not contented yourself, after having planted the seed, to leave them to their fate. Continue the same attention to cleanliness, and to keeping the earth stirred, and by and bye, we'll do ourself the honor of trying their quality, —that is, if you are willing. Should the weather prove dry, recollect that *watering* is an antidote against drought.

Full Pickles.—If you desire to have good pickles for your wife and daughters, (and we know you do, for there never was a good man yet but took pride in gratifying them,) we say then, if you desire to have good pickles, make your gardener distil a little elbow grease, in preparing a bed without delay. It is time they were planted.

Beans and Peas.—These may now be planted for late fall use, and as there is nothing like having a variety of vegetables on the table, let us advise you to get them in before you can say Jack Robinson, as when there is no time to lose, every day, nay hour, is precious.

Cauliflower plants for late fall use, may still be set out.

Celery.—This is a vegetable that no good husband should be without; besides being a most healthful one, it forms a handsome dish, gratifies the ladies' pride, and adds much to the appearance of the dinner table. If these be considerations sufficiently substantive to induce you to set out a bed, then all we have to say is, that it is now time to put in your plants. Deep rich loam suits Celery best: the exposure should be an open one, where it can be indulged with the enjoyment of sun and air, and draw upon the dews of Heaven, for copious supplies of their rich gases. If you have not grown it, it may be as well for us to tell you how to manage a bed.

After having selected your bed, spread over it manure, well rotted, three inches deep, spade this in a spade deep, rake fine, then lay off the bed in beds 4 feet wide, with alleys between 3 feet wide; dig these beds a spade deep, throw the earth upon the alleys, when this is done, then lay 4 or 5 inches in depth, of strong well rotted manure, all over the bottom of the beds thus dug out, dig and incorporate it with the loose earth, then cover with 2 inches in depth of earth from the alleys, plant your plants in *rows* a foot apart, the *plants* 8 inches asunder. Before inserting the plants, trim off the tops. After this, lay small pine or cedar bushes between the rows, (or straw will do,) to keep up moisture until the plants take a start. Water the plants every evening until they take root, or until a good soaking rain comes. Keep the plants clean from the beginning, until they are fit to be earthed up, which will be in a few weeks. When that time comes, we will remind you, as we are determined, if your lady and her amiable daughters do not have good Celery, the fault shall not be ours.

Radishes, Small Sallading of all kinds, Lettuce, &c.—may, and should be, sown this month. As to Radishes, you should sow them weekly for a month to come.

Leeks, Shallots and Shives—should now be transplanted, and if you love good soup, and expect to enjoy it, provide plenty of *these*, as well as *thyme* and *parsley*, and you will not be disappointed; we can promise you *that*.

Fruit trees.—Examine such of your young trees as were budded or grafted last season, have all the shoots from the stocks rubbed off, as by remaining, they rob the grafts of the nourishment they ought to get. Did you say you had no fruit trees? Yes. Then take shame to yourself, for having kept your family so long out of a luxury so delightful and healthful; and plant some this fall. Play no longer truant to your duty.

Cherries, Plums, and *Apricots*—should be budded this month, and *Pears* inoculated. Operations of this kind are most successfully performed in cloudy weather.

Potatoes, Beets, Parsnips and *Carrots.*—Look to these roots, and *see* that no blades of grass, or envious weeds are permitted to raise their heads in their midst, as you may be assured that they delight not in communion with such pestilent loafers.

Tomatoes, Egg Plants, Horse Radish and *Peppers.*—Have a care to these, and "render unto Cesar the things that are Cesar's," for every living thing, whether it be a tame elephant of the Menagerie, or a vegetable of the garden, delights in those soft attentions which fill the stomach and sing a lullaby to the appetite.

Flowers.—These are pretty things at all times; but those belonging to your lady, are particularly so, and as they carry on their frontlets the impress of kind and indulgent treatment, we will not trespass on *her* province farther than to whisper, that she should get *you* to *see* that the gardener plays no niggard's part with his watering pot, as a July sun extracts the moisture of the earth, with more than a spendthrift's prodigality, and its wants must be generously supplied. These *Dahlias* look well, are all full of promise, but if you wish to see them flower with more than their native perfection, you must *see* that your laundress, once a week, lets them drink copiously of soap suds, as the oil, the rezin, and the potash, are therein so delightfully commingled, as to form a nutriment which is, of all others, the best adapted to urge them onward to perfection, and ensure a *bloom* that will prove alike the wonder and admiration of the lovers of Flora.

With these brief hints we ask leave to make our best bow; but before we do so, by way of an *Anchory*, we'll request you to do us the favor to go into your garden three times a day, and *see* that what ought to be, is done.

BALTIMORE MARKET, July 1, 1843.

PROVISIONS—					
Beef, Balt. mess,	$10	a	Butter, Glades, No. 1,		
Do. do. No. 1,	9	a	Do. do. 2,		
Do. prime,		a	Do. do. 3,		
Pork, mess	11½	a12	Do. Western, 2,		a8
Do. No. 1	11	a	Do do. 3,	6	a
Do. prime	10	a	Lard, Balt. kegs, 1,	7	a7¼
Do. cargo,			Do. do. 2,	none	
Bacon, hams, Ba. lb.	8½		Do. Western, 1,	7	a7¼
Do. middlings, "		a	Do. do. 2,		
Do. shoulders, "		a	Do. do. bbls 1,		
Do. asst'd, West.	5	a5¼	Cheese, casks,	6½	a7
Do. hams,	6	a6½	Do. boxes,	6½	a7½
Do. middlings,	5	a5½	Do. extra,	10	a20
Do. shoulders,	4	a4½			
COTTON—					
Virginia,	6	a 7	Tennessee, lb.		
Upland,	6	a 7½	Alabama,	6¼	a 8
Louisiana,	7	a 8	Florida,	7	a 7½
North Carolina,	7	a	Mississippi	7¼	a
LUMBER—					
Georgia Flooring	12	a15	Joists & Sc'ling, W.P.	7	a10
S. Carolina do	9	a11	Joists & Sc'ling, Y.P.	7	a10
White Pine, pann'l	25	a27	Shingles, W. P.	2	a9
Common,	20	a22	Shingles, ced'r,	3.00	a9.00
Select Cullings,	14	a16	Laths, sawed,	1.25	a 1.75
Common do	8	a10	Laths, split,	50	a 1.00
MOLASSES—					
Havana, 1st qu. gl	16½	a18	New Orleans	20½	a23
Porto Rico,	21	a24½	Guadaloupe & Mart	19	a
English Island,			Sugar House,	28	a36
TOBACCO—					
Common	2½	a 3½	Yellow,	7	a 9
Brown and red,	4	a 5	Fine yellow,	7¼	a10
Ground leaf,	6	a 7	Virginia,	4	a 9
Fine red	6¼	a 8	Rappahannock,		
Wrappery, suitable for segars,	8	a13	Kentucky,	3	a 7
Yellow and red,	7	a10	St. Domingo,	13	a11
			Cuba,	15	a38
PLASTER PARIS—					
Cargo, pr ton cash	2.87	a	Ground per bbl.	1.00	a

WOOL—

WASHED.			UNWASHED.		
Saxony,	33	a35	Saxony and Merino	16	a18
Full Merino,	30	a33	Common, to ¼ blood,	14	a17
3-4 blood do.	27	a30	Pulled,		
1-2 do do	24	a27			
1-4 and common,	18	a20			
Tub washed,	18	a20			

SUGARS—

Hav. wh. 100lbs	7.50	a9.00	St. Croix, 100lbs	5.00	a7.00
Do. brown	6 25	a7.00	Brazil, white,	7.00	a8.00
Porto Rico,	5.00	a7.50	Do. brown,		
New Orleans,	4.50	a6.25	Lump, lb. c.		
COFFEE—					
Havana,	7	a 8	Java, lb.	10	a13
P. Rico & Laguay.	7¼	a 8	Rio,	7¼	a 8¾
St. Domingo,	6	a 6½	Triage,	5	a 7
FEATHERS—per lb.				20	a25
RAISINS—Malaga bunch, box,				1 60	a1 65
FLOUR—We quote					
Superfine How. st., from stores, bl.				$5.50	a 5 62
Do. City Mills,				5.75	a
Do. Susquehanna,				5.50	a
Rye, first				3.12	a3.25
Corn Meal, kiln dried, per bbl.				2.87	a 3
Do. per hhd.				$12 75	a13.
SOAP—					
Baltimore white,	12	a14	North'rn, br'n & yel.	3¼	a4½
" brown & yell'w	4½	a5½			
GRAIN—					
Wheat, white, p bu.	120		Peas, black eye,	112	
" best Pa. red	115	a116	Clover seed, store	3.50	a3.75
" ord. to pri. Md	80	a112	Timothy do	1.87	a2.25
Corn, white,	52	a53	Flaxseed, rough st. p.	1.25	
" yellow Md.	53	a54	Chop'd Rye, 100 lbs.	1.25	
Rye, Pa.	60	a	Ship Stuff, bus.	20	a22
Oats, Md.	24	a27	Brown Stuff,	14	a15
Beans,	112	a	Shorts, bushel,	10	a
CANDLES—					
Mould, common,	9	a10	Sperm,	24	a25
Do. choice brands,	10½		Wax,	60	a65
Dipped,	8	a 9			

Cattle—370 head offered on Monday, and nearly all sold at prices ranging from 1.75 for inferior to $3 pr 100 lbs. for prime quali. on the hoof, equal to 3.50 a 5 75 net; the sales, principally at intermediate prices.

Live hogs, a fair supply—range of prices $4a4.25.

Tobacco—The market is very animated, sales comprising almost all the receipts, and good descriptions Mary'd are wanted, and sell readily as soon as they come into market. Common and inferior sorts have likewi'e been more in demand, and considerable sales made at 2.75a$3, and some very inferior lots at $2 50. The quantity very inferior and common now for sale is very light; indeed the sto'k of all sorts in the hands of the commission merchants is very much reduced. Prices, however, has not advanced —Ohio Tobacco is in good demand and sales are freely made as soon as the receipts are inspected—Owing to the scarcity of shipping at present, the stocks have accumulated to such an extent that a large amount of Tobacco has been stored in private warehouses.

DURHAM BULL AND BERKSHIRE BOAR.

FOR SALE.—A two years old Durham Bull of beautiful figure and fashionable blood, being out of a very high bred herd book cow and got by BEMENT's celebrated Bull *Astoria*. An animal of finer form or temper cannot be found. He will be sold at the extremely low price of $150.

Also, a two years old Berkshire Boar,—a fine animal, selected from the piggery of C. N. Bement—Price $15.

Also, a young Berkshire SOW, a year old, with 5 pigs by the above boar 4 weeks old—Price $15

Apply at the office of the American Farmer. June 14

LIME—LIME.

The subscriber is prepared to furnish any quantity of Oyster Shell or Stone Lime of a very superior quality at short notice at their Kilns at Spring Garden, near the foot of Eutaw street Baltimore, and upon as good terms as can be had at any other establishment in the State.

He invites the attention of farmers and those interested in the use of the article, and would be pleased to communicate any information either verbally by or letter. The Kilns being situated immediately upon the water, vessels can be loaded very expeditiously. N.B. Wood received in payment at market price.

ap. 22 3m E. J COOPER.

MARTINEAU'S IRON HORSE-POWER IMPROVED

Made less liable to get out of order, and cheaper to repair, and at less cost than any other machine.

The above cut represents this horse-power, for which the subscriber is proprietor of the patent-right for Maryland, Delaware and the Eastern Shore of Virginia; and he would most respectfully urge upon those wishing to obtain a horse power, to examine this before purchasing elsewhere; for beauty, compactness and durability it has never been surpassed.

Threshing Machines, Wheat Fans Cultivators, Harrows and the common hand Corn Sheller constantly on hand, and for sale at the lowest prices.

Agricultural Implements of any peculiar model made to order at the shorest notice.

Castings for all kinds of ploughs, constantly on hand by the pound or ton. A liberal discount will be made to country merchants who purchase to sell again.

Mr. Hussey manufactures his reaping machines at this establishment

R. B. CHENOWETH,

corner of Front & Ploughman sts. near Baltimore st. Bridge, or No. 80 Pratt street. Baltimore, mar 31, 1841

HUSSEY'S REAPING MACHINE.

Farmers are respectfully requested to send their orders as soon as they shall have decided on procuring machines to cut the next year's crop: by doing so, they will enable the subscriber to make preparations early in year with confidence, so that none may be disappointed at harvest time, as has been the case for several years past by delaying to apply for them in season. His former practice will be steadily adhered to of making no more machines than are ordered, lest a failure of the next years crop should leave a large number on his hands, unsold, which his circumstances will not allow. It is hoped that the great success which has attended the machines made for the last harvest will remove every doubt of their great value. Several persons have cut as high as 20 acres in a day with the last improved machines, while one gentleman with one of the old machines cut his entire crop of 72 acres in less than five days, without having a cradle in the field.

The greatest objection ever made to the machine was its heavy bearing on the shaft horse; this has been entirely removed by adding a pair of forward wheels to support the front of the machine, and a driver's seat at an extra expense of 20 dollars.

CORN & COB CRUSHER

The subscriber's Corn & Cob crusher which obtained the first premium over several competitors at the late Fair of the N. York State Agricultural Society held at Albany, N. Y. and is so highly recommended in the public prints, by farmers who have used them, will be kept constantly on hand for sale.

no 9 OBED HUSSEY

D. O. PROUTY,

Manufacturer of Agricultural Implements, No. 176 Market street, Philadelphia, above 5th, south side, has constantly for sale on reasonable terms, an extensive assortment of *Farming Implements*, of the latest and most approved Patterns, among which are Prouty & Mears Patent Centre Draught Self-sharpening Ploughs, Subsoil and Side Hill Ploughs, Cultivators—Corn Shellers—Hay and Straw Cutters—Grain Fans—Corn Planters—Harrows, Cheese Presses—Apple Parers—Churns—Grain Cradles—Corn Crushers—Dirst Scrapers—Hoes, Shovels Spades, &c.

Books on Agriculture, Horticulture and Rural affairs also Garden, Grass and Flour Seeds for sale at wholesale and retail, very low for cash by D. O. PROUTY.

may 17 1m 176 Market st., Philadelphia.

POUDRETTE.

PRICES REDUCED for this valuable fertilizer.

The New York Poudrette Company, having enlarged their works have now on hand a good supply of a first rate article, which they offer in parcels of *ten* barrels or more at $1,50 per barrel, or *three* barrels for $5—delivered on board of vessels.

☞ Orders, enclosing the cash, will be promptly attended to if addressed to D. K. MINOR,

118 Nassau street, N. Y.

N. B. The farmers of Maryland, who reside near navigable water, will do well to enquire into the value of Poudrette as a manure. Those who have used it need no argument in relation to its value —and the best evidence which those, who have not used it, can have is to procure a few barrels and apply it to their Corn, Tobacco, Melons, &c.—*Seeing* is *believing*. feb. 1

PATENT MANURE.

The undersigned, manufacturers of manure, by what has been called the "Bommer process" respectfully announce that they have taken Mr. Thos. M. Abbett into partnership, and will in future conduct their business under the firm of Abbett & Co.

CHARLES BAER,
JOHN GOULIART.

Baltimore, June 26, 1843.

ABBETT & Co. having united their discoveries and improvements with those of Mr. George Bommer of New York, respectfully inform the public that they will continue the sale of their method in the states South and West of Pennsylvania and Ohio

With the view of graduating the cost, to the quantity of land upon which it may be desired to use the method, the following scale of prices has been adopted, viz:

For Gardens of any extent - - - -	$6 00
Farms under 100 acres - - - -	10 00
Farms from 100 to 200 acres - - - -	15 00
do from 200 to 400 acres - - -	20 00
do over 400 acres - - - - -	25 00

By the remittance of the sum here specified, a copy of the method will be sent by mail or in any other mode proposed by the purchaser.

No one need have fears of failure as we have known of no instance of the kind, where our instructions have been followed.

Heaps of manure consisting of straw, hay, corn stalks, shucks, cobs, leaves and other ligneous plants have been constructed in the neighborhoods of Albany, New-York, Philadelphia, Baltimore and Washington, which have been converted into a rich fertilizing, and unctious manure, in some cases in the short space of 15 days, while in others, owing to the difference of the material and the season, (the bitter and cold weather of last winter) it has taken nearer 60 days. The average we consider to be about 28 days, and cost about $4 for a thousand cart loads.

Mr. Baer will be in Richmond in the second week of July, for the purpose of waiting upon our patrons there, and giving such personal instructions as they may desire. The citizens of Va. wishing individual rights are referred to Mr C T. Botts, editor of the Southern Planter, who is our principal agent for that State.

All letters of inquiry must be post paid.

Applicants for the patent right for either states or counties will please address themselves to

ABBETT & CO., Baltimore,
Or to Thos. M. Abbett in Hollins st. above Cove.

NOTICE.—The patent right for the New England States, New York, New Jersey, Delaware and Pennsylvania is held by Mr. Geo. Bommer, New York.

Baltimore, June 28, 1843.

☞The patrons of the American Farmer and others will have their orders for rights and directions for using the above process, supplied by enclosing the cash, post paid, to S. SANDS.

HARVEST TOOLS.

JONA. S. EASTMAN, Pratt street, has in store, Wolf's superior Pennsylvania made Grain Cradles, Grain and Grass Scythes, warranted superior quality.—Also, steel and wood Hay Forks; Hay Rakes, of different qualities; Grass Seeds; Weeding Hoes, Spades and Shovels. Chopping Axes. &c. &c.

Likewise Threshing Machines and Horse Powers, for two or four horses, equal to any machines of the kind in use. Also, on hand, a large supply of his superior patent Cylindrical Straw Cutters, at reduced prices, both for the wood and iron frames; Corn Shellers; Corn and Tobacco Cultivator, plain and expanding, and of superior quality. His stock of PLOUGHS on hand is extensive, embracing a great variety of all sizes, with cast and wrought iron shares, including his newly invented patent and premium PLOUGH, with Iron beam, and self sharpening point, greatly simplified. His stock of Plough Castings, on hand is also large, and of superior quality, superior as he believes to any ever before made in this State. He has patterns that are highly approved for Horsepowers and Threshing Machines, from which he will furnish castings on reasonable terms, to those that wish to manufacture those Machines.

The above named articles will be sold at wholesale and retail for cash, or approved city acceptances, at prices to suit the exigencies of the times

In store, Landreth's superior Garden SEEDS, of last year's growth. ma 22

HARVEST TOOLS, THRESHING MACHINES, &c.

ROBERT SINCLAIR, Jr. & CO. No 60 Light st. Baltimore, Offer for sale at reduced prices,

Grain and Grass Scythes	Wheat Fans, several most approved sizes and patterns
GrassScythes with hangings complete	Scythe Stones, Rifles,
Grain Cradles, wood braced	Scythe Nibs and Rings
do iron braced	Cradlers' Hammers
Sickles, German and American	

ALSO,

HORSE POWERS for two or more horses

THRASHING MACHINES, made on the spike principle, very strong and durable

Straw Carriers to attach to do.

Those Threshers and Horse Powers are now so generally used and approved of by farmers in Maryland, that it is scarcely necessary to say any thing in regard to their merits Those however who have not had an opportunity of seeing them in operation are referred to the following gentlemen who have our Threshers and Powers in use, viz.

Col. Jno. Mercer, near Annapolis		Henry Fite, Baltimore Co.	
Col. Boyle,	do	Dr. A. Tyson	do
B. D. Hall,	do	Moses Potter	do
Mr. Hopkins,	do	Jas Rittenhouse	do

Wm. F. Rennoe and R. B. Posey, St Mary's co.

☞About 350 more names can be given if required from gentlemen in different parts of this and other states, many of whom have been using our machines since 1838. R. S. jr. & Co.

may 31 tf

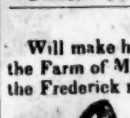
A MARKET GARDENER WANTED.

One who can come well recommended, (and none other need apply) will find a good situation on application to S. SANDS, at the office of the American Farmer. ja 21 3t†

OXEN—Two pair well broken, wanted—Apply as above.

MINGO CHIEF,

Will make his second season in Maryland, and be let to Mares at the Farm of Mr. J. P. E. STANLEY, 4 miles from Baltimore, on the Frederick road, at Eight Dollars for each mare.



MINGO CHIEF is 6 years old this spring, near 15 hands high, of a rich brown color, perfectly formed for speed and action, goes all gaits naturally, and is very fast under the saddle.

Mingo Chief was got by an Indian horse well known at Montreal as "La Belle Poney", (grandsire of the famous trotting horse Beppo. and many other celebrated trotters and rackers;) that in his prime has racked his mile in 2.30, and altho' upwards of 20 years old, is stil kept for mares in Canada

The dam of Mingo Chief was pure Canadian, and could trot a mile in 3 minutes without training Mingo Chief was selected during the summer of 1841, in the neighborhood of Montreal (by a gentleman experienced in these matters,) as being the best horse he could find to cross upon the stock of this part of the country for the production of saddle horses. The celebrated Morgan breed of Vermont is said to be of the same cross.

☞Season commenced 1st April and ends 1st July.

ap 26 E. WEEKS, Manager.

AGRICULTURAL MACHINERY & IMPLEMENTS.

The subscriber begs leave to assure the public that he is prepared to execute orders for any of his agricultural or other machinery or implements with promptness. His machinery is so well known that it is unnecessary to describe the varions kinds, but merely annex names and prices:

Portable Saw Mill with 12 ft. carriage, and 24 ft. ways and 4 ft. saw,	$300
Extra saws for shingles with 3 pair of head blocks,	125
Post Morticing Auger,	15
Bands,	10
Horse Power of great strength,	200
Corn and Cob Crusher, wt. 600 lb.	65
Thrashing Machine. wt. 300 lb.	75
Corn Planter. wt. 100 lb.	25
Thrashing Machine, wt 600 lb.	150
Grist Mill, 2½ ft. cologne stones,	150
Do. 3 ft. do.	175
Belts for the same,	15
Post Auger, wt. 15 lbs.	5
Tobacco Press complete, portable,	85
ortable Steam Engine, with portable Saw Mill and cutting off Saw,	3500
Large Sawing and Planing Machine with cutting off saw, or cross cutting for large establishments,	1100
If made of iron,	3000
Large Boring and Morticing machine for large establishments	150
Tenoning Machine	200
Vertical Saw	125
Small Morticing Machine, suitable for carpenters,	25

All of which articles are made in the most superior style of workmanship, of the best materials, and warranted to answer the purposes for which they are intended. It cannot be expected that the subscriber can speak of the merits of the above enumerated articles within the compass of an advertisement. Suffice it to say, that each have found numerous purchasers. and proved entirely satisfactory The Portable Saw Mill with a 10-horse power engine, can cut, *with perfect ease*, 10,000 feet of lumber a day, and, if necessary, could greatly exceed that quantity.

GEORGE PAGE,
West Baltimortreet, Baltimore, Md.

☞Pamphlets containing cuts with descriptions of the above named machines, can be had on application (if by letter post paid) to the subscriber, or to Mr. S. Sands, at the office of the American Farmer. sep 1 tf

WOOL, WOOL, WOOL.

The subscribers respectfully inform the farmers of Maryland, that they are now manufacturing

Best twil'd Kersey, 3-4 wide,	33 1-3c.	pr yd.	12 to 16 oz.	clean wool is required	
Striped linsey for women,	1 1-4 do.	33 1-3 do.	8 to 10 do	do	do
Unfull'd kersey for men,	1 1-4 do.	28c. do.	12 oz.	do	do
Coarse Cloth, all wool,	3-4 do.	41c do.	1 1-4 lb.	do	do
Carpeting, a new and elegant style,	62 1-2c.	do.	1 1-8 lb.	do	do

When the yarn is sent doubled and twisted, 44c.

Fine Cloth for gentlemen's wear, 3-4, 75c. 1lb.

Blankets, all wool, 1 1-8 yd. wide, 37 1 2c. pr yd. 1 to 1 1-4 do do

Customers will send their wool to their agent in Baltimore, and write to us respecting it, care of Wells Chase, No 5 South Eutaw street, Baltimore. Refer to Messrs. Neal & Luckett, and Battee & Lowe, Baltimore; Col. Edw. Lloyd E S; Jas. Kent, esq. A. A. co.

JAMES MITCHELL & CO.
je 14 3t‡ of the firm of Owings & Mitchell

FOR SALE.

A handsome thorough bred DURHAM BULL, about 6 or 7 months old, from very superior stock. Price $65, deliverable in Baltimore—Apply to SAM. SANDS.

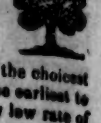
TO FARMERS.

The subscriber has for sale at his Plaster and Bone Mill on Hughes street, south side of the Basin, GROUND PLASTER, GROUND BONES, OYSTER SHELL & STONE LIME, and LEACHED ASHES, all of the best quality for agricultural purposes, and at prices to suit the times.

Vessels loading at his wharf with any of the above articles, will not be subject to charges for dockage or wharfage

fe 23 WM. TREGO, Baltimore.

PEACH AND PEAR TREES.



The subscriber is prepared to supply Peach Trees of the choicest kinds, surpassed by none in the U. States, and of the earliest to the latest kinds, which he is enabled to sell at the very low rate of 12½ cents per tree, if packed an extra charge.

He can also supply a few very choice Pear Trees at 50 cts. per tree—and in the Fall will be able to furnish any quantity required of many kinds.

Catalogues furnished on application at the Farmer office. Entire reliance may be placed on the genuineness of these trees, and of their being of the choicest kinds. ap 12 S. SANDS.

LIME FOR AGRICULTURAL PURPOSES.

Having accumulated a large stock of first quality Oyster Shell Lime, at my kilns on the Potomac River, I beg leave to say to the Farmers and Planters generally, and more especially to those who are anxious to improve their lands, and have been deterred from doing so by the scarcity of money and low prices of their produce, that I will sell them lime delivered on board of vessels at the kilns, either at Lancaster's Tide Mill, near the mouth of the Wicomico River; Lower Cedar Point, or Pickewaxin Creek, at 6¼ Cents per bushel, payable March 1st, 1844, (if ordered, deliverable between this date and 1st of August next,) or I will deliver it on the above terms, charging in addition the customary freight, which must in all cases be cash. Orders addressed to me, at *Miller's Post Office, Charles County, Md.*, will receive prompt attention from WM. M. DOWNING.

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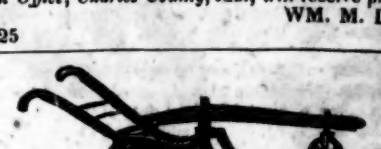

BARNABY & MOOERS' PATENT SIDE-HILL & LEVEL LAND PLOUGH.

To which was been awarded the following and Several other Premiums, viz.—By the American Institute, at their Ploughing Match at Newark, N. J. 1842. the First Premium. a Silver Cup—and at their Annual Ploughing-Match for 1841, at Sing Sing, N.Y. a Gold Medal for the best work done, lightest draught. and best principle of construction.—answering for "general purposes" The N. York State Agricultural Society, awarded it an Extra Premium of $50, at their Annual Ploughing Match at Syracuse for 1841.

The following are its advantages over the Common Plough, viz.—1st. Ease of Draught—2d. Perfection of Work—3d. Strength and Durability—4th. All Dead Furrows may be prevented. as the Furrows can all be turned one way—5th. Any width of Furrows may be turned. between 8 18inches, by moving the eatches in the cross-piece towards the handles for a wide Furrow,—and towards the centre for a narrow one—6th. Placing the beam in the centre of the cross-piece, makes it a "Double Mould-Board Plough," turning a Furrow both ways at the same time,—answering for Green-Ridging, Ploughing between Corn and Potatoes, or any any crop cultivated in rows or drills,—and for Digging Potatoes.

The subscribers having purchased the Right to Manufacture the above celebrated Ploughs, for the State of Maryland, are now prepared to furnish Farmers with the same,—and they pledge themselves to the Public, to manufacture this Plough in the Very Best Manner, both as to materials and workmanship. ☞All Orders will be thankfully received and punctually attended to

☞Price as Follows, (adding Transportation.)—No. 2, 45lb. at $7. No. 3, wt. 70 lbs. $10—No. 4, 80 lbs. $11—No. 5, 90 lbs. $12. Extra edge, 50 Cents. For Colter, if added, laid with steel, $1.50. Wheel, $1,50. Shin Pieces, 12½ Cents.

DENMEAD & DANIELS, corner Monument and North-sts. who having purchased Mott & Co's interest, are now sole owners.

B. H. WILSON, No. 52, Calvert st. 1 door below Lombard, is Agent for the sale of the above Plough. Baltimore, Nov 23, 1842

BENTLEY'S AGRICLTURAL STEAM GENERATOR

MANUFACTURED BY BENTLEY, RANDALL & Co.,

Manufacturers of *Bentley's Convoluted Steam Boilers*, Baltimore, Md. for steaming Corn Stalks, Hay, Potatoes, Boiling water, &c. It is also highly recommended to Tanners for steaming Leaches, also for various manufacturing and mechanical purposes, where steam or large quantities of hot water is required. This article is made wholly of iron, and was got up expressly to meet the wants of the Agricultural community, and it is confidently believed that for simplicity, durability, economy in money, fuel, time, and room combined its equal has not been offered to the public. It possesses all the principles of the most approved Tubular Locomotive Boilers, for saving of fuel, while the construction is such that one of equal size, strength and durability that has heretofore cost $100, or more, is now offered at $45. It is operated equally well with Anthracite coal as with wood, and can be removed by two persons at pleasure.—Prices No. 1 $45, considered of capacity enough for ordinary Farm purposes; No. 2 $60, No. 3 $75.

BENTLEY, RANDALL & Co.
McCausland's Brewery, Holliday, st. near Pleasant.

We have the liberty of referring to the following gentlemen, viz:—David Barnum, Esq City Hotel; Captain Jackson, warden of the Maryland Penitentiary, and Doct. Robt Dorsey of Edw., where they can be seen in operation.

Agents, J. F. Callan, Esq. Washington City; Capt. John Brooks, Upper Marlboro', Prince Georges' Co. Md. where samples can be seen. For numerous testimonials in favor of the above call on the manufacturers or their agents.

N. B. B. R. & Co., are also agents for Murray's Corn and Cob Crushers. Balto. Md., Dec. 1842.

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